

REMARKS/ARGUMENTS

These remarks are made in response to the Office Action of February 4, 2008 (Office Action). As this response is timely filed within the 3-month shortened statutory period, no fee is believed due. However, the Examiner is expressly authorized to charge any deficiencies to Deposit Account No. 50-0951.

Claim Rejections – 35 USC § 103

In the Office Action, Claim 25 was rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Published Patent Application 2001/0020249 to Shim (hereinafter Shim) in view of U.S. Published Patent Application 2004/0068586 to Xie, *et al.* (hereinafter Xie). Claims 13 and 38 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shim in view of U.S. Patent 6,732,188 to Flockhart, *et al.* (hereinafter Flockhart). Claims 1-11, 14-16, 19, 20, 23, and 26-36 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shim in view of U.S. Patent 6,067,637 to Auer, *et al.* (hereinafter Auer), and further in view of U.S. Published Patent Application 2005/0038708 to Wu (hereinafter Wu). Claims 12, 17, 18, 21, 22, 24, and 37 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Auer in view of Wu, and further in view of Flockhart.

Although Applicants respectfully disagree with the claim rejections, Applicants have amended the claims so as to expedite prosecution of the present application. It is expressly noted, however, that the amendments should not be interpreted as the surrender of any subject matter. Accordingly, Applicants respectfully reserve the right to present the original version of any of the amended claims in any future divisional or continuation applications from the present application.

Applicants have amended independent Claims 1, 14, and 26 to further emphasize certain aspects of the invention. Other independent claims have been either cancelled or amended into dependent claims. As discussed herein, the claim amendments are fully supported throughout the Specification. No new matter has been introduced by the claim amendments.

Aspects of Applicants Invention

It may be helpful to reiterate certain aspects of Applicants' invention prior to addressing the cited references. One embodiment of the invention, as typified by amended Claim 1, is a method of scheduling pattern-based Web services.

The method can include receiving a request for a plurality of Web services and extracting a pattern object from the request and placing the extracted pattern object in a work area. The pattern object specifies a plurality of Web services to be invoked. The method also can include provisioning one or more termination rules within a termination watcher. The termination watcher removes the pattern object from the work area if it is detected that the pattern object conforms to one or more of the termination rules.

The method further can include providing a plurality of service activation rules accessible by a scheduler, each service activation rule specifying a trigger condition and a state condition for causing a watcher and a corresponding Web service to be activated; receiving in the scheduler at least one event generated dynamically and indicating a change in the work area, each event specifying trigger information; comparing the service activation rules with the trigger information of the at least one event; identifying service activation rules having trigger conditions and state conditions that match the received event and corresponding pattern object; causing watchers specified by the identified service activation rules to execute and thus invoke corresponding Web services; and

running the Web services until a termination criterion is detected by the termination watcher. See, e.g., Specification, paragraphs [0065]-[0072]; see also Fig. 4.

The Claims Define Over the Cited References

An aspect of the present invention as recited in the independent claims is to provide a method and system that can handle a request that involves a plurality of Web services, such as Web services for carrying out tasks hierarchical in nature. The method and system use a pattern-based approach in which any change of the pattern object extracted from the request will result in an event that will lead to a matching watcher and a corresponding Web service. This approach has the advantage of eliminating the need to build a new request for each of a plurality of related Web services.

Shim discloses a system for automatically providing Internet services in which various Internet services are automatically provided without having to log on to individual Internet service Websites (see paragraph [0002]). However, the subject matter of Shim has nothing to do with the pattern-based approach of the present invention. It is described in paragraph [0027] of Shim that the service automation module 40 includes a script module for automatically providing Internet services in a script format or an operation module for automatically providing Internet services according to a program. The script module or operation module enables the automatic reception of Internet services from the terminal 1 even without connection to one of a plurality of servers 3, 4, 5 and 6 which provide Internet services. However, Shim does not describe any mechanism by which the matching Internet services can be found.

More specifically, Shim does not disclose extracting a pattern object from the request and placing the extracted pattern object in a work area, the pattern object specifying a plurality of Web services to be invoked; provisioning one or more termination rules within a termination watcher, wherein the termination watcher removes

the pattern object from the work area if it is detected that the pattern object conforms to one or more of the termination rules; providing a plurality of service activation rules accessible by a scheduler, each service activation rule specifying a trigger condition and a state condition for causing a watcher and a corresponding Web service to be activated; receiving in the scheduler at least one event indicating a change in the work area, wherein each event specifies trigger information; comparing the service activation rules with the trigger information of the at least one event; identifying service activation rules having trigger conditions and state conditions that match the received event and corresponding pattern object; causing watchers specified by the identified service activation rules to execute and thus invoke corresponding Web services; or running the Web services until a termination criterion is detected by the termination watcher, as recited in the independent claims, as amended.

Auer discloses a system and method for pre-filtering data to create and/or maintain data in a networking memory such that the data can be more efficiently used by an expert system. First, it is noted that the system of Auer has nothing to do with a system for scheduling pattern-based Web services, which is the subject matter of the present invention. Second, in Auer event triggers are used to filter data that is potentially relevant to the operation of the expert system. However, as already discussed above, the key of the present invention is not just to filter Web services using trigger information, but to dynamically generate events based on changes in the work area (a new pattern object has been added, the pattern object has been modified, etc.) in order to dynamically schedule a plurality of related Web services required by one single request.

The other cited references do not make up for the differences between the present invention and Shim in view of Auer.

Accordingly, the cited references, alone or in combination, fail to disclose or suggest each and every element of Claims 1, 14, and 26, as amended. Applicants

therefore respectfully submit that amended Claims 1, 14, and 26 define over the prior art. Furthermore, as each of the remaining claims depends from Claim 1, 14, or 26 while reciting additional features, Applicants further respectfully submit that the remaining claims likewise define over the prior art.

Applicants thus respectfully request that the claims rejections under 35 U.S.C. § 103 be withdrawn.

Finally, it was asserted on page 22 of the Office Action that there is an apparent period lacking activity from prior to August 10, 2003 and August 26, 2003 (the filing date of Wu and Xie) until September 30, 2003 and thus the evidence is not persuasive in proving diligence. However, it is noted that the diligence relates to reasonable "attorney-diligence" and "engineering-diligence" (*Keizer v. Bradley*, 270 F.2d 396, 397, 123 USPQ 215, 216 (CCPA 1959)), which does not require that "an inventor or his attorney ... drop all other work and concentrate on the particular invention involved..." *Emery v. Ronden*, 188 USPQ 264, 268 (Bd. Pat. Inter. 1974). See also *Bey v. Kollonitsch*, 866 F.2d 1024, 231 USPQ 967 (Fed. Cir. 1986) (Reasonable diligence is all that is required of the attorney. Reasonable diligence is established if attorney worked reasonably hard on the application during the continuous critical period. If the attorney has a reasonable backlog of unrelated cases which he takes up in chronological order and carries out expeditiously, that is sufficient.) See MPEP § 2138.06.

CONCLUSION

Applicants believe that this application is now in full condition for allowance, which action is respectfully requested. Applicants request that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the

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Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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